



MAIL STOP - AMENDMENT  
Docket No. 27407U

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor:	LEUCHTE	Art Unit:	1742
Appl. No.:	10/579,550	Examiner:	XX
Filing Date:	June 20, 2006	Conf. No.:	3962
Title:	METHOD FOR COVERING COPPER WITH PATINA		

TRANSMITTAL LETTER

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Sir:

Submitted herewith for filing in the U.S. Patent and Trademark Office is the following:

1. Submission of Documents to Supplement Filing Documents under 35 USC 371;
2. PCT/IB/373 (International Preliminary Report on Patentability); and
3. PCT/ISA/237 (Written Opinion of the International Searching Authority).

The Commissioner is hereby authorized to charge any deficiency or credit any excess to Deposit Account Number 14-0112.

Respectfully submitted,

THE NATH LAW GROUP

April 6, 2007

THE NATH LAW GROUP  
112 South West Street  
Alexandria, VA 22314

Gary M. Math, Reg. No. 26,965  
Tanya E. Harkins, Reg. No. 52,993  
Customer No. 20529

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SUBMISSION OF DOCUMENTS  
TO SUPPLEMENT FILING DOCUMENTS UNDER 35 USC 371

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In order to supplement the filing documents for the national phase filing Under USC 371 commenced on June 20, 2006, applicant now submits the following documents:

1. PCT/IB/373 (International Preliminary Report on Patentability); and
2. PCT/ISA/237 (Written Opinion of the International Searching Authority).

Please charge any deficiency or credit any overpayment to our Deposit  
Account Number 14-0112.

Respectfully submitted,

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# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference P 42 510 WO	<b>FOR FURTHER ACTION</b>	See item 4 below
International application No. PCT/EP2004/013009	International filing date ( <i>day/month/year</i> ) 17 November 2004 (17.11.2004)	Priority date ( <i>day/month/year</i> ) 17 November 2003 (17.11.2003)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant KM EUROPA METAL AKTIENGESELLSCHAFT		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 *bis*. 1(a).

2. This REPORT consists of a total of 7 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- |                                     |              |   |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the report   |
| <input type="checkbox"/>            | Box No. II   | Priority  |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input type="checkbox"/>            | Box No. IV   | Lack of unity of invention  |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited   |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application  |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application   |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No. +41 22 338 82 70	Date of issuance of this report 29 August 2006 (29.08.2006)
	Authorized officer  Ellen Moyse  e-mail: pt05@wipo.int

# PATENT COOPERATION TREATY

**TRANSLATION**

From the  
INTERNATIONAL SEARCHING AUTHORITY

**PCT**

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing **See form PCT/ISA/210**  
(day/month/year)

Applicant's or agent's file reference

**P 42 510 WO**

**FOR FURTHER ACTION**

See paragraph 2 below

International application No.

**PCT/EP2004/013009**

International filing date (day/month/year)

**17.11.2004**

Priority date (day/month/year)

**17.11.2003**

International Patent Classification (IPC) or both national classification and IPC

**C23C22/63, C23C22/68, C23C22/82**

Applicant

**LEUCHTE, Jürgen**

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP

Authorized officer

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2004/013009

Box No. 1

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language  
\_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2004/013009

Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
<b>1. Statement</b>			
Novelty (N)	Claims	3-8, 17-19, 28	YES
	Claims	1, 2, 9-16, 20-27	NO
Inventive step (IS)	Claims		YES
	Claims	1-28	NO
Industrial applicability (IA)	Claims	1-28	YES
	Claims		NO
<b>2. Citations and explanations:</b>			
<p><b>Explanatory statement according to Article 35(c) regarding novelty, inventive step and industrial applicability; documents and explanations to support this statement</b></p> <p>1) Reference is made to the following documents:</p> <p style="margin-left: 40px;">D1: EP-A-0 492 566 (KM-KABELMETAL AKTIENGESELLSCHAFT; KM EUROPA METAL AKTIENGESELLSCHAFT) 1 July 1992 (1992-07-01)</p> <p style="margin-left: 40px;">D2: GB 697 294 A (IMPERIAL CHEMICAL INDUSTRIES LIMITED) 16 September 1953 (1953-09-16)</p> <p style="margin-left: 40px;">D3: PATENT ABSTRACTS OF JAPAN, Vol. 1997, No. 07, 31 July 1997 (1997-07-31) &amp; JP 09 067681 A (GANTAN BEAUTY KOGYO KK), 11 March 1997 (1997-03-11)</p> <p style="margin-left: 40px;">D4: PATENT ABSTRACTS OF JAPAN, Vol. 1996, No. 09, 30 September 1996 (1996-09-30) &amp; JP 08 120460 A (MITSUI MINING &amp; SMELTING CO LTD), 14 May 1996 (1996-05-14)</p> <p style="margin-left: 40px;">D5: HALL N: "COLORING OF METALS" METAL FINISHING, ELSEVIER SCIENCE PUBLISHING, NEW YORK, NY, US, Vol. 80, No. 1A, January 1982 (1982-01), pages 550, 552, 554, 55, XPOO2010742 ISSN: 0026-0576</p> <p style="margin-left: 40px;">D6: PATENT ABSTRACTS OF JAPAN, Vol. 2003, No. 07, 3 July</p>			

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

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Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

2003 (2003-07-03) & JP 2003 089880 A (GANTAN BEAUTY  
IND CO LTD), 28 March 2003 (2003-03-28)

D7: RUHLAND M: "Antiquing of brass, copper, and bronze"  
METAL FINISHING, ELSEVIER SCIENCE PUBLISHING, NEW  
YORK; NY, US, Vol. 100, January 2002 (2002-01), pages  
442-455, XP004681995 ISSN: 0026-0576

- 2) Documents D1 - D4 disclose a method for covering copper  
surfaces with patina (see D1, column 2, line 35 to column  
3, line 42 and claims; D2, column 1, line 17 to column 3,  
line 32; D3, abstract, and D4, abstract).

The methods all comprise a treatment of the surface with  
a patination solution and a maturation process at a  
predetermined atmospheric humidity and temperature.  
Thus, the documents are all prejudicial to the novelty of  
claims 1, 2, 25 and 26 (PCT Article 33(2)).

In document D2, a solution comprising 20g cupric ammonium  
chloride, 10g ammonium sulphate and 100g water was used  
as a patination solution. Document 4 uses a solution  
comprising 1 to 20 wt.% zinc chloride. In document D1,  
the surface was pre-treated by degreasing and roughening  
it. The patination solution was sprayed on in documents  
D1 and D2. Documents D1 and D3 treated strip materials.  
The method in the application and the methods of  
documents D1 to D4 are very similar. Thus, it may be  
assumed that similarly thick layers are obtained.

Therefore, the subject matter of claims 9 - 16, 20, 27  
and 28 is not novel, either.

2.2 Documents D5 (see page 554, "Tiffany Green") and D6

WRITTEN OPINION OF THE  
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Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

(see example 2 and abstract) disclose patination solutions comprising a cupric salt as well as zinc chloride and sulphate ions.

The solution in D5 is prejudicial to the novelty of the subject matter of claims 21-24. The solution in D6 is prejudicial to the novelty of the subject matter of claims 21, 23 and 24.

2.3 The subject matter of claims 3-8 and 17-19, however, is novel. Neither the precise maturation conditions in claims 3-8 nor the methodical steps in claims 17-19 are known from documents D1-D4.

3 The methodical steps in claims 17-19 are standard practice in patination processes and a person skilled in the art would apply them particularly based on document D1 without thereby being inventive.

3.1 Document D2 is considered the prior art closest to the subject matter of claims 3-8.  
Document D2 discloses a maturation process comprising moistening of a surface treated with a patination solution, drying, and a resting time of at least 2 hours. Document D2 creates a patina which looks like a natural patina and adheres very well.

Claims 3-8 essentially define only a selection of suitable conditions for the method in D2 and thereby achieve the same results. If a person skilled in the art wished to use a maturation



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citations and explanations supporting such statement

process as per document D2 he could easily take the conditions in claims 3-8 into consideration. Such a selection may however only be considered inventive if the conditions lead to unexpected effects or properties. However, such effects or properties are not stated in the application. Thus, the subject matter of claims 3-8 does not involve an inventive step.